Claims as Amended:

1. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), the arrangement consisting of two electrically conductive electrodes (2), wherein said electrodes are not electrically connected to one another, and a surface structure with suitable dimensions for representation of conductivities of the electrode arrangement and/or of a substance of a sensor-active layer by the conductance of a measuring probe or of a function element, wherein on a surface of a dielectric substrate (1) between two electrodes (2) a number of conductive islands (3), which are not or are not essentially connected with one another, are applied as a two-dimensional area arrangement.

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4. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), the arrangement consisting of two electrically conductive electrodes (2), wherein said electrodes are not electrically connected to one another, and a surface structure with suitable dimensions for representation of conductivities of the electrode arrangement and/or of a substance of a sensor-active layer by the conductance of a measuring probe or of a function element according to claim 1, wherein the conductive islands (3) are arranged within selected geometric figures.

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